

## Amended Claims:

- 1. (original) A method of decoding two-channel matrix encoded audio to reconstruct multichannel audio that approximates a discrete surround-sound presentation, comprising:
- subband filtering the two-channel matrix encoded audio into a plurality of two-channel subband audio signals;

separately steering the two-channel subband audio signals in a sound field to form multichannel subband audio signals; and

synthesizing the multichannel subband audio signals in the subbands to reconstruct the multichannel audio.

- 2. (original) The method of claim 1, wherein the reconstructed multichannel audio comprises a plurality of dominant audio signals.
- 3. (original) The method of claim 2, wherein said dominant audio signals reside in different subbands.
- 4. (original) The method of claim 3, wherein steering the two-channel subband audio signals comprises computing a dominance vector in said sound field for each said subband, said dominance vector being determined by the dominant audio signals in the subband.
- 5. (original) The method of claim 1, wherein subband filtering groups the subband audio signals into a plurality of bark bands.

- 6. (original) The method of claim 1, wherein the two-channel matrix encoded audio includes at least left, right, center, left surround and right surround (L,R,C,Ls,Rs) audio channels, said two-channel subband audio signals being steered into an expanded sound field that includes a discrete point for each said audio channel.
- 7. (original) The method of claim 6, wherein each said discrete point corresponds to a set of gain values predetermined to produce an optimized audio output at each of L,R,C,Ls,Rs speakers, respectively, when the two-channel subband audio signals are steered to that point in the expanded sound field.
  - 8. (original) The method of claim 7, wherein each said discrete point further includes a gain value predetermined to produce an optimized audio output at a center surround (Cs) speaker when the subband audio signal is steered to that point in the expanded sound field.
  - 9. (original) The method of claim 7, wherein steering the audio signals, comprises:

computing a dominance vector in said sound field for each said subband, said dominance vector being determined by the dominant audio signals in the subband;

using said dominance vectors and said predetermined gain values for said discrete points to compute a set of gain values for each subband; and

using said two-channel subband audio signals and 10 said gain values to compute the multichannel subband audio signals.

- 10. (original) The method of claim 9, wherein the gain values for each subband are computed by performing a linear interpolation of the predetermined gain values surrounding the dominance vector to define the set of gain values at the point in the sound field indicated by the dominance vector.
- 11. (original) The method of claim 1, wherein the expanded sound field comprises a 9-point sound field, each said discrete point corresponding to a set of gain values predetermined to produce an optimized audio output at each of L,R,C,Ls,Rs speakers, respectively, when the two-channel subband audio signals are steered to that point in the expanded sound field.
  - 12. (cancelled)
  - 13. (cancelled)
  - 14. (cancelled)

15

- 15. (original) A method of decoding two-channel matrix encoded audio to reconstruct multichannel audio that approximates a discrete surround-sound presentation, comprising:
- providing two-channel matrix encoded audio that includes at least left, right, center, left surround and right surround (L,R,C,Ls,Rs) audio channels;

subband filtering the two-channel matrix encoded audio into a plurality of two-channel subband audio 10 signals;

separately steering the two-channel subband audio signals in an expanded sound field to form multichannel subband audio signals, said sound field having a discrete point for each said audio channel, each said discrete point corresponding to a set of gain values predetermined to

produce an optimized audio output at each of L,R,C,Ls,Rs speakers, respectively, when the two-channel subband audio signals are steered to that point in the expanded sound field; and

- 20 synthesizing the multichannel subband audio signals in the subbands to reconstruct the multichannel audio.
  - 16. (original) The method of claim 15, wherein the reconstructed multichannel audio comprises a plurality of dominant audio signals that reside in different subbands.
  - 17. (original) The method of claim 15, wherein subband filtering groups the subband audio signals into a plurality of bark bands.
  - 18. (original) The method of claim 15, wherein each said discrete point further includes a gain value predetermined to produce an optimized audio output at a center surround (Cs) speaker when the subband audio signal is steered to that point in the expanded sound field.
  - 19. (original) The method of claim 15, wherein the expanded sound field comprises a 9-point sound field.